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10/500,072	04/15/2005	Mauro Maritano	09877.0312-00	7161
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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER GRAY, JILL M	
			ART UNIT	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/500,072

**Applicant(s)**

MARITANO ET AL.

**Examiner**

Jill Gray

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 October 2009.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-28 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Pursuant to the entry of the amendment of October 29, 2009, the status of the claims is as follows: Claims 1-28 are pending. Claims 13, 15, and 16 are amended. Claims 27 and 28 are new.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 15 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. More specifically, applicants have amended claims 15 and 16 citing said corrections as obvious typographical errors. However, the specification, as originally filed, discloses "N,N'-esan-1,6-diil[3,5-di-(ter-butyl-4-hydroxyphenyl)propionamide] and "IRGANOX 1098" and Formula III as "poll L-aminoacid". See [0027], [0028], [0085], and [0089] of publication. There is no clear factual evidence on this record that the amendment to claims 15 and 16 actually reflect a typographical error.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More specifically, in claim 28, the language of "a temperature of about 85%" is indefinite because it is not clear what the baseline temperature is of which 85% is being referenced.

Hence, the metes and bounds for which patent protection is being sought are not clear.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anelli et al., 6,577,796 B2 and PCT Publication WO 00/21098 (hereinafter referred to collectively as Anelli) in view of Uemura et al., 5,134,036 (Uemura) and Kamachi et al., 5,187,226 (Kamachi), for reasons of record.

Anelli is as set forth previously and discloses a telecommunications cable comprising an elongated element housing at least one transmitting element, said element comprising a water-soluble polymer material such as vinyl alcohol/vinyl acetate copolymer, as required by claim 1. See for example abstracts and entire documents. In addition, the elongated element is a tubular element comprising at least one sheath made from said water-soluble polymer material, comprising a double layer sheath in which the inner sheath is made from a water-soluble polymeric composition and the

outer sheath is made from a conventional water-insoluble composition, and further comprising a third outer sheath made from water-soluble polymer material, as required by claims 18-20. Alternatively, Anelli discloses that the elongated element is a grooved core comprising at least one groove longitudinally disposed on the outer surface of said core, as required by claim 21. See for example '796, column 4, lines 35-62. As to the specific composition of the water-soluble polymer material, Anelli discloses that his particular preferred embodiment comprises a vinyl alcohol/vinyl acetate copolymer that can be obtained by partial hydrolysis of the acetate groups of a polyvinyl acetate homopolymer. See column 5, line 50 through column 6, and line 2. Anelli discloses that his composition can contain conventional additives such as stabilizers and plasticizers, wherein at least 5% of the total weight of the composition is plasticizer, and can range from about 1% to about 30% by weight as required by claims 10-11. Additionally, Anelli discloses that the copolymer is present in amounts of at least 50% by weight and more than 75% by weight, per claims 8-9. See for example '796 column 10, lines 17-40 and column 17, lines 12-27. Anelli is silent as to the specific stabilizer.

Uemura discloses ethylene-vinyl alcohol copolymers produced by saponification of ethylene-vinyl ester (such as vinyl acetate) in the presence of an antioxidant of the type contemplated by applicants, namely, "IRGANOX 1098". See entire document and for example columns 3-5. Kamachi discloses vinyl alcohol polymers and copolymers with vinyl acetate that are produced by a process that includes hydrolysis in the presence of an antioxidant such as "IRGANOX 1098" which enhances the degree of

polymerization in the presence of oxygen. See entire document, and for example, columns 5-7.

Regarding claims 1, 6-7, 12-17, and 22-26, Kamachi teaches that "IRGANOX 1098" can be used as an antioxidant as long as it does not lose its activity against oxidation. This teaching would have suggested that the aforementioned antioxidant is not merely used in the hydrolysis process, but that it is present in the final product to some degree to impart antioxidant properties.

It would have been obvious to one having ordinary skill in the art to modify the teachings of Anelli by using including a known, commercially available antioxidant, with the reasonable expectation of obtaining the efficacious properties associated therewith.

Regarding claims 27-28, the collective teachings of the prior art set forth a vinyl alcohol/vinyl acetate copolymer that is substantially similar to that contemplated by applicants. Hence, the examiner has reason to believe that properties such as the saponification and variation of saponification number would be the same as well, in the absence of factual evidence to the contrary.

Regarding claims 2-5, it is the position of the examiner that the discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art.

Therefore, when considered as whole, the combined teachings of Anelli, Uemura and Kamachi would have rendered obvious the invention as claimed in present claims 1-28.

***Response to Arguments***

8. Applicant's arguments filed October 29, 2009 have been fully considered but they are not persuasive.

Applicants argue that a person of ordinary skill in the art would not look to the teachings of Anelli, in view of Uemura and Kamachi, because the stabilizers of Anelli serve their function after the VA/AVc copolymer has been manufactured whereas the antioxidants of Uemura and Kamachi are taught to function during the production of a copolymer, not after the production of a copolymer.

Agreeably Anelli teaches the inclusion of a stabilizer in his composition after the formation of the copolymer and Uemura and Kamachi teach that the stabilizers can be used during the saponification process. However, it is the examiner's position that Uemura and Kamachi each teach that when the antioxidant is used, it must maintain its antioxidant functionality. Hence, implicit in the prior art teachings is the desirability for the antioxidant properties of the antioxidant, whereby said properties are incorporated in the resultant VA/AVc copolymer. This teaching would have provided a suggestion to the skilled artisan at the time the invention was made to use as the stabilizer of Anelli, known, commercially available stabilizing compound, that is known in the art to impart antioxidant properties to VA/AVc copolymers, as taught by Uemura and Kamachi. Moreover, the end product, e.g. the telecommunication cable, comprising a VA/AVc coating that is stabilized against oxidation, would be substantially the same as that taught by the prior art.

Applicants argue that both Uemura and Kamachi fail to teach or suggest that the antioxidants described therein can act as "hydrolysis stabilizers" in polymeric

compositions comprising previously-manufactured VA/AVc copolymers, such as taught by Anelli. Applicants further argue that there is simply no teaching or suggestion in the cited art that "IRGANOX 1098" or a similar compound can be combined with an already saponified VA/AVc copolymer, such as the one described by Anelli.

In this regard, it is the examiner's position that regardless as to whether Uemura and Kamachi teach or suggest that their antioxidants can act as a "hydrolysis stabilizer" in polymeric compositions is not germane, because they each teach using a known, commercially available antioxidant and they each teach the necessity of maintaining the antioxidant functionality. A compound cannot be separated from its' properties. Moreover, "IRGANOX 1098" is a known stabilizer. It is *prima facie* obvious to use a known compound for its art recognized purpose. In addition, it is the examiner's position that it would have been obvious to the skilled artisan during routine experimentation to modify and adjust the processing conditions/steps to result in a copolymer having the requisite degree of saponification and antioxidant properties. Moreover, the fact that Anelli teaches that stabilizers can be added clearly suggests that any commercially available stabilizer, including "IRGANOX 1098" could be used with a reasonable expectation of success of forming a telecommunications cable that is stabilized against oxidation. Again, it is *prima facie* obvious to use a known compound for its art recognized purpose.

Applicants argue that one of ordinary skill in the art would not be motivated to combine the teachings of Anelli, Uemura, and Kamachi in the manner proposed, because the stabilizers of Anelli serve their function after the VA/AVc copolymer has



been manufactured, whereas the antioxidants of Uemura and Kamachi function during the production of a copolymer, not after the production of a copolymer.

The examiner disagrees for reasons stated above by the examiner, and incorporated herein. Moreover, the fact that Uemura and Kamachi teach a different use of their stabilizer, in addition to maintaining its antioxidant functionality, does not preclude the obviousness of using said stabilizer for its art recognized purpose. The skilled artisan would see the advantage in saving time and cost by forming said copolymer, and during routine experimentation, adding additional amounts of the antioxidant for antioxidant functionality. Moreover, it is not clear how the end product, e.g. the telecommunication cable, distinguishes over the prior art telecommunication cable.

Applicants argue that Uemura and Kamachi actually teach away from the addition of antioxidants such as "IRGANOX 1098" to the compositions of Anelli.

The examiner disagrees for reasons stated previously in this Office Action and incorporated herein. In addition, Uemura and Kamachi each teach that their reactions can be done in the absence of oxygen or in the presence of an antioxidant, and that if down in the presence of an antioxidant, it is desirable to maintain the antioxidant properties. Hence, Uemura and Kamachi teach the reliance on antioxidants such as "IRGANOX 1098" for its dual functionality. Clearly this suggests to the skilled artisan that "IRGANOX1098" could be used as an antioxidant for copolymers of the type contemplated by applicants.

Applicants argue that Uemura and Kamachi do not describe antioxidants like "IRGANOX 1098" as hydrolysis stabilizers.

In this regard, it is the examiner's position that the fact that applicants refer to this commercially available compound as a hydrolysis stabilizer does not preclude said commercially available compound being used for its' art recognized purpose. As set forth previously, it is not clear how the resultant telecommunication cable distinguishes from that of the prior art.

Applicants argue that unexpected superior properties of the present claimed composition.

In this regard, while the comparative data in the specification may contain superior properties of the specific compound, "IRGANOX 1098", this showing is not commensurate in scope with the present claims. Claim 1 is not limited to this specific compound, and is not limited to any specific amounts of said compound.

No claims are allowed.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Gray/  
Primary Examiner  
Art Unit 1794

jmg